

What is claimed is:

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1. A method of forming a floating gate in a flash memory device, comprising the steps of:
 - (a) forming a gate oxide film on a semiconductor substrate;
 - (b) depositing a first polysilicon film on the gate oxide film;
 - (c) etching portions of the first polysilicon film, the gate oxide film and the semiconductor substrate to form a trench;
 - (d) depositing an oxide film for an isolation film on the entire top surface so that the trench is gap-filled and then implementing a polishing process;
 - (e) implementing an etch process using a dry etch method to etch the oxide film for the isolation film, thus forming the oxide film for the isolation film the top of which has a protrusion of a vertical nipple shape; and
 - (f) depositing a second polysilicon film on the entire top surface and then implementing a polishing process to form a floating gate that is divided around the oxide film for the isolation film and consists of the first and second polysilicon film.
- 20 2. The method as claimed in claim 1, wherein the polishing process implemented in the step (d) employs a CMP method or an ACE method.
3. The method as claimed in claim 1, further comprising the step

of after the step (f), implementing a pre-treatment cleaning process in a wet etch mode for the entire top surface to isotropically etch the top surface of the protrusion exposed in the step (f), thus forming the isolation film the top of which has a semicircle shape.

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